## ABSTRACT

A red phosphor composition in combination with a semiconductor light emitting device (e.g., VCSEL, LED, or LD), preferably a GaN based device, that emits light at a bright violet- blue light range, i.e., having a wavelength in the range of 400 nm to 600 nm, which can be further combined with green and blue phosphors. The red phosphor composition in the combination is a vanadate combined with yttrium, gadolinium and/or lanthanum and activated with trivalent $Eu^{3+}$, $Sm^{3+}$ and $Pr^{3+}$, or any combination thereof, with or without $Tb^{3+}$ as a co-dopant, has the general formula: $Bi_xLn_{1-x}VO_4$:A where x = 0 to 1, Ln is an element selected from the group consisting of Y, La and Gd, and A is an activator selected from $Eu^{3+}$, $Sm^{3+}$ and $Pr^{3+}$, or any combination thereof, with or without $Tb^{3+}$ as a co-dopant. Novel red phosphor compositions are provided when x is greater than 0 and less than 1, preferably 0.05 to 0.5.